



COMMONWEALTH *of* LEARNING

Can the ugly duckling of ODL be transformed into a swan?

The MOOC effect

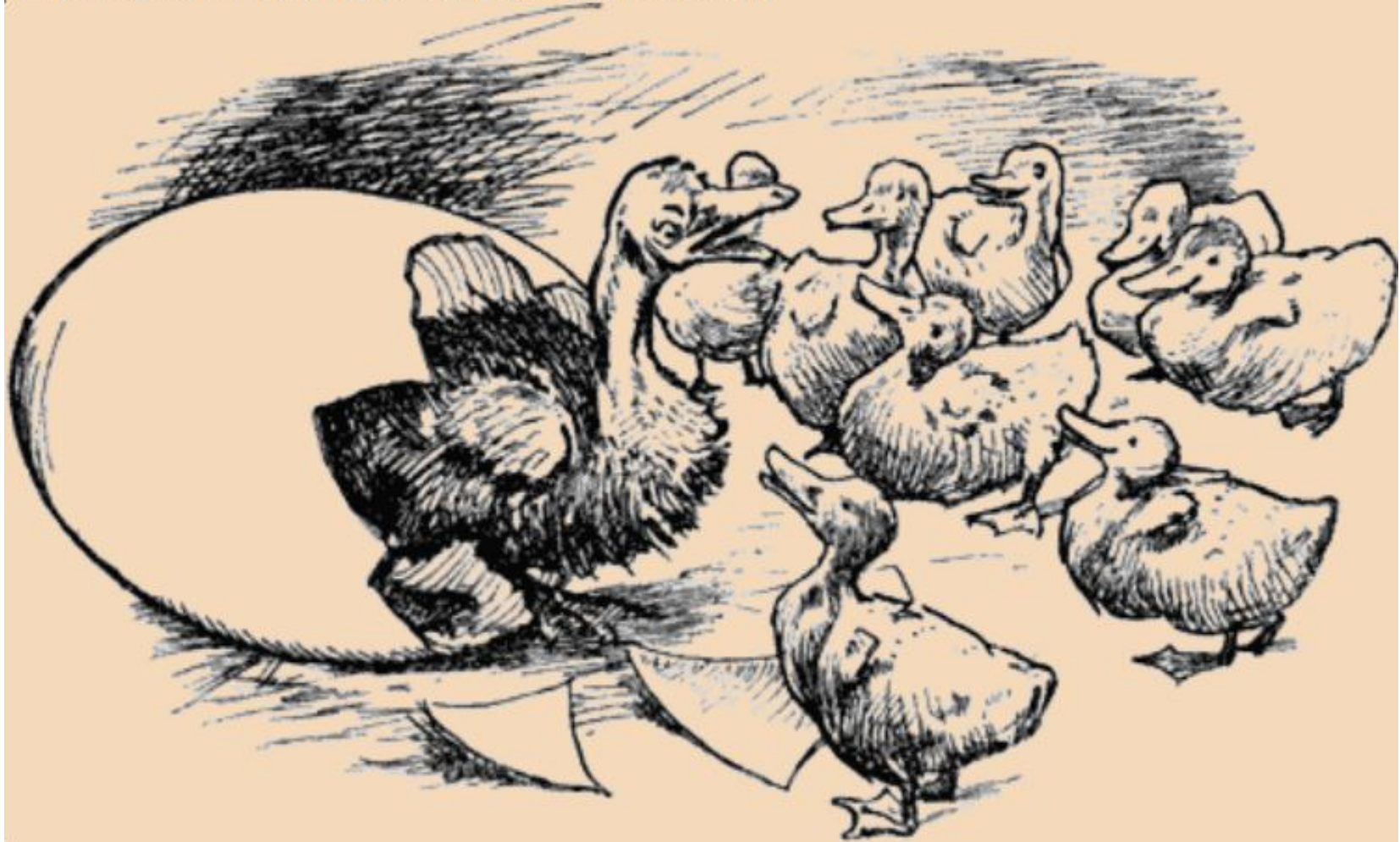
Professor Asha Kanwar

*President & Chief Executive Officer
Commonwealth of Learning*

October 4, 2013



"Just as you please," said the old Duck; and she went away. At last the great egg burst. "Piep! piep!" said the little one, and crept forth. It was very large and very ugly. The Duck looked at it.



"Peep! Peep!" said the youngster as he rolled out of the shell.

"It's a very large duckling," said she; "none of the others look like that: can it really be a turkey chick? Now we shall soon find it out. It must go into the water, even if I have to thrust it in myself."

Correspondence Colleges

- INTEC, Cape Town (ICS) (1906)
- Lyceum College (Union College) (1917)
- Rapid Results College (1928)
- Success College (1940)
- Damelin Correspondence College (1948)
- Turret Correspondence College (1970)



UNISA



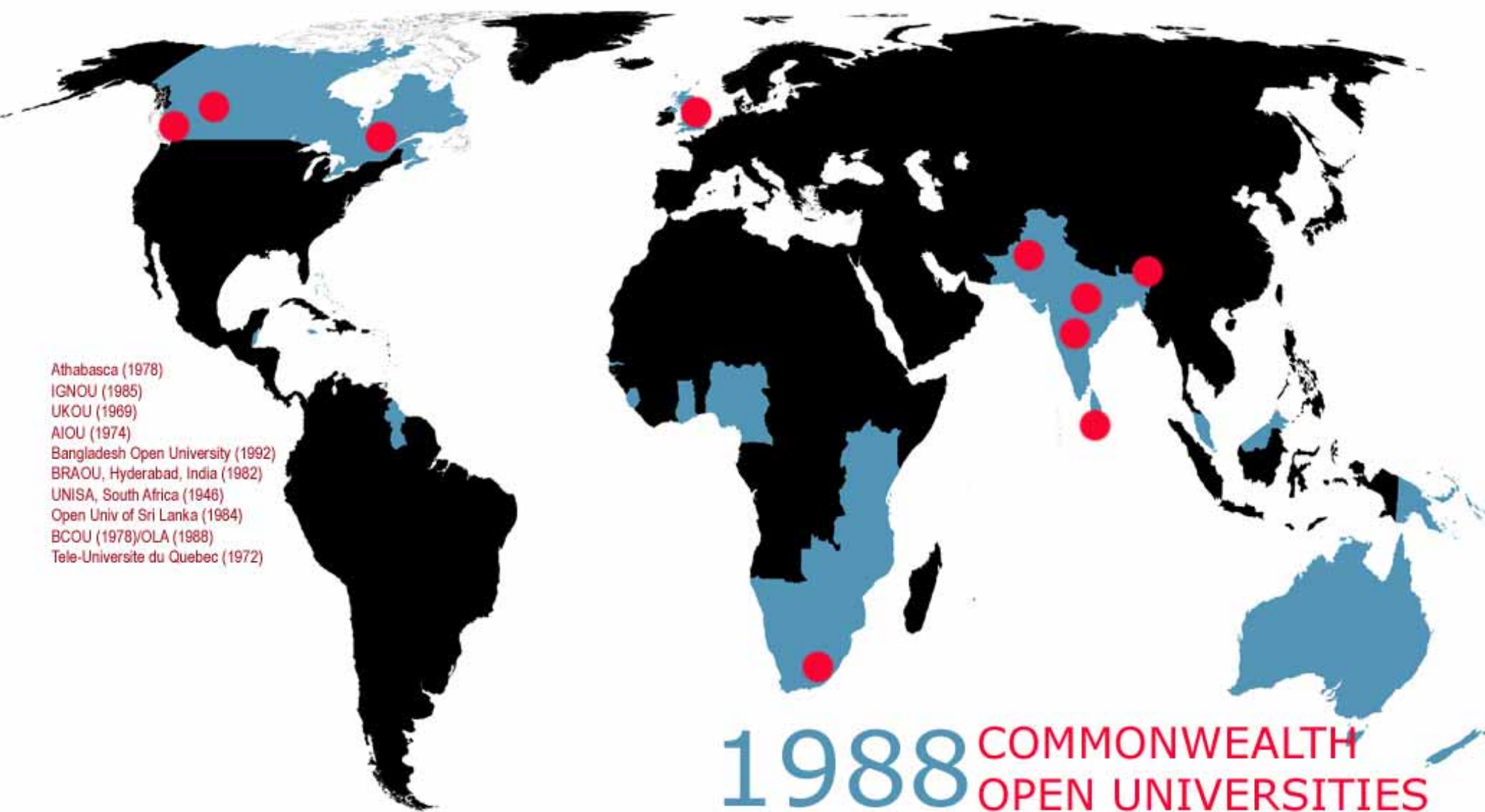
university
of south africa



Prof Mandla S Makhanya
Unisa Principal
and Vice-Chancellor

The Rise of Open Universities





- Athabasca (1978)
- IGNOU (1985)
- UKOU (1969)
- AIOU (1974)
- Bangladesh Open University (1992)
- BRAOU, Hyderabad, India (1982)
- UNISA, South Africa (1946)
- Open Univ of Sri Lanka (1984)
- BCOU (1978)/OLA (1988)
- Tele-Universite du Quebec (1972)

1988 COMMONWEALTH OPEN UNIVERSITIES





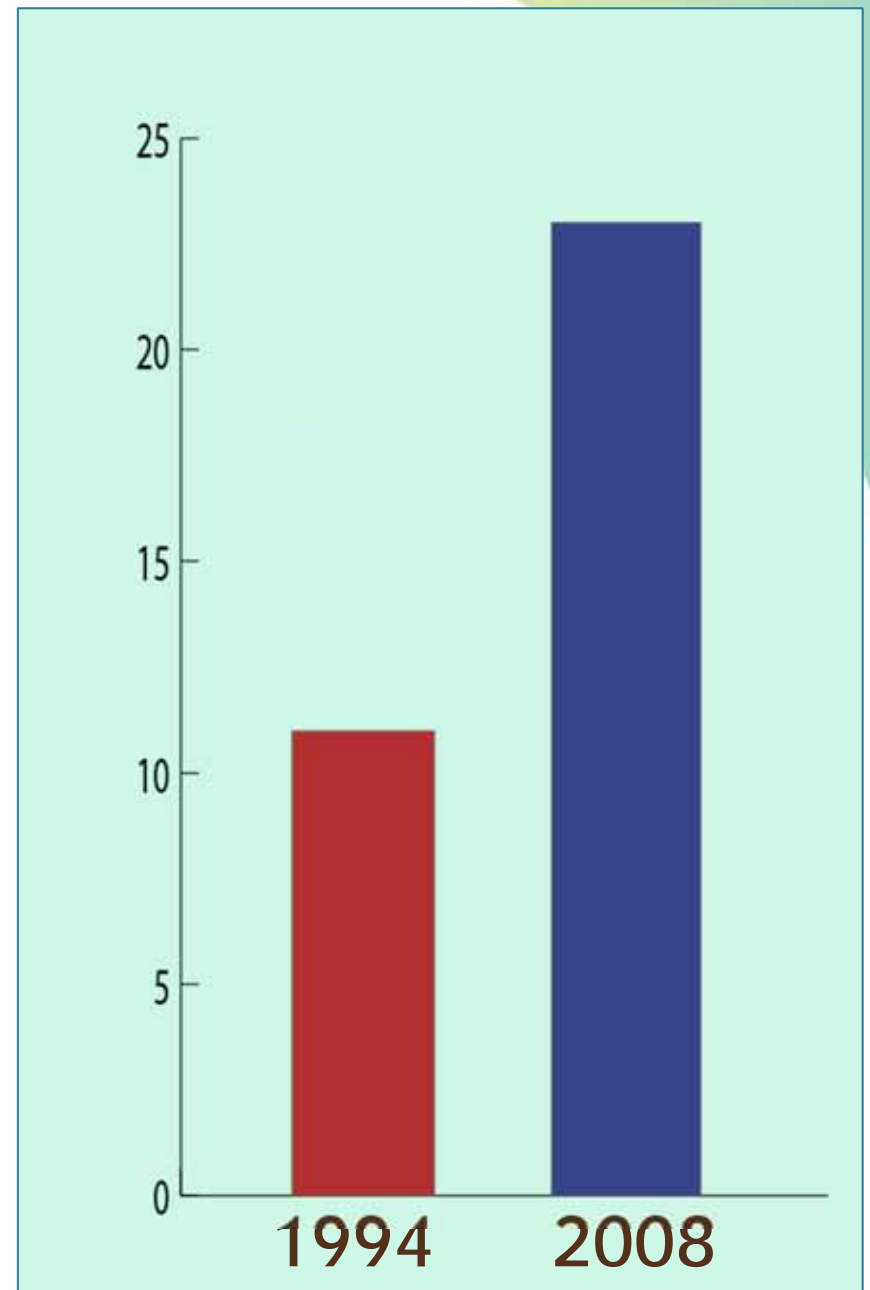
- IGNOU
- UKOU
- AIOU
- Athabasca
- Open University of Malaysia
- Open University of Tanzania
- National Open University of Nigeria
- Netaji Subhash Open University
- Bangladesh Open University
- BRAOU, Hyderabad, India
- YCMOU, Nashik, India
- MPBOU, Madhya Pradesh, India
- UNISA, South Africa 110,000
- Open Univ of Sri Lanka
- TNOU, Tamil Nadu, India
- Kota Open Univ, Rajasthan, India
- Open Univ, Uttar Pradesh, India
- Nalanda Open University, Bihar, India
- DBROU
- KSOU, India
- Open University of Zambia
- Open University of Uttaranchal, India
- Open University of Assam, India
- Open University of Cyprus
- K.K. Hadique State University, India
- The Open Polytechnic of New Zealand
- Wawasan Open University, Malaysia
- Open University of Mauritius

2012 COMMONWEALTH OPEN UNIVERSITIES



Mega-Universities

- 1994:
11 with 3 million
- 2008:
23 with 9 million



A strange paradox

Distance education is booming

BUT

Opposition to ODL is emerging
all over the world

Barriers to ODL

- No government employment for ODL graduates
- Distinguish between ODL and F2F on transcripts



Ecuador

Proposed Legislation:

'(Academic diplomas and degrees) should make mention of the modality in which the studies were completed...'



Ethiopia

“a surprising case”

August 26, 2010: Ministry of Education announces

All distance education programmes in private and public institutions scrapped.

‘distance learning education is unnecessary at this stage in the development of the education sector’



Ethiopia

“a happy ending”

The ban was lifted in October 2010 after robust negotiations with 64, mostly private, institutions and the introduction of a quality assurance system.



China

“by preventing the TV Universities from offering four-year degrees China effectively condemns them to an educational ghetto of low prestige no matter how high the quality of their work”

John Daniel



Plan

- The context
- The response
- Implications for ODL in the developing world



The context

- Demand
- Costs
- Technology



cloudcampus™

Udemy

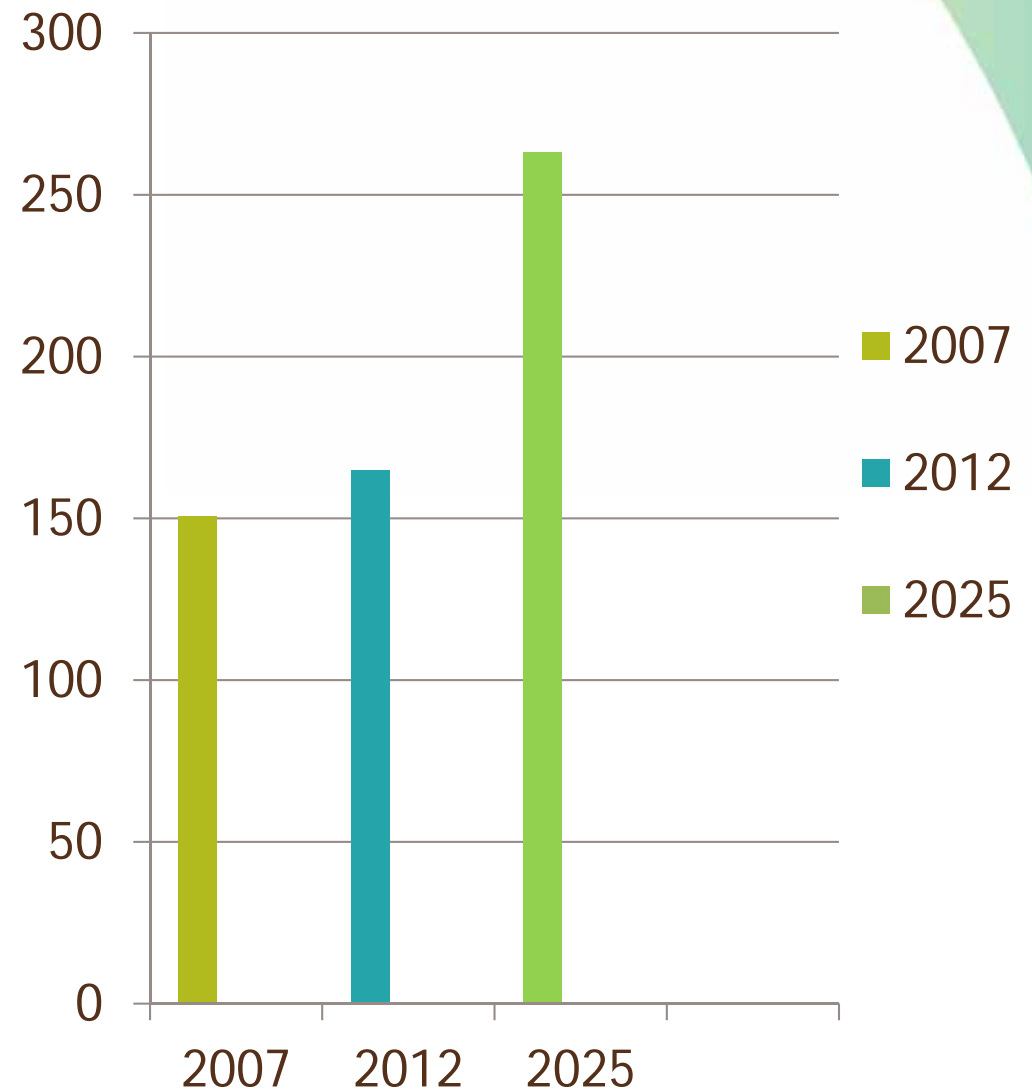
coursera

edX

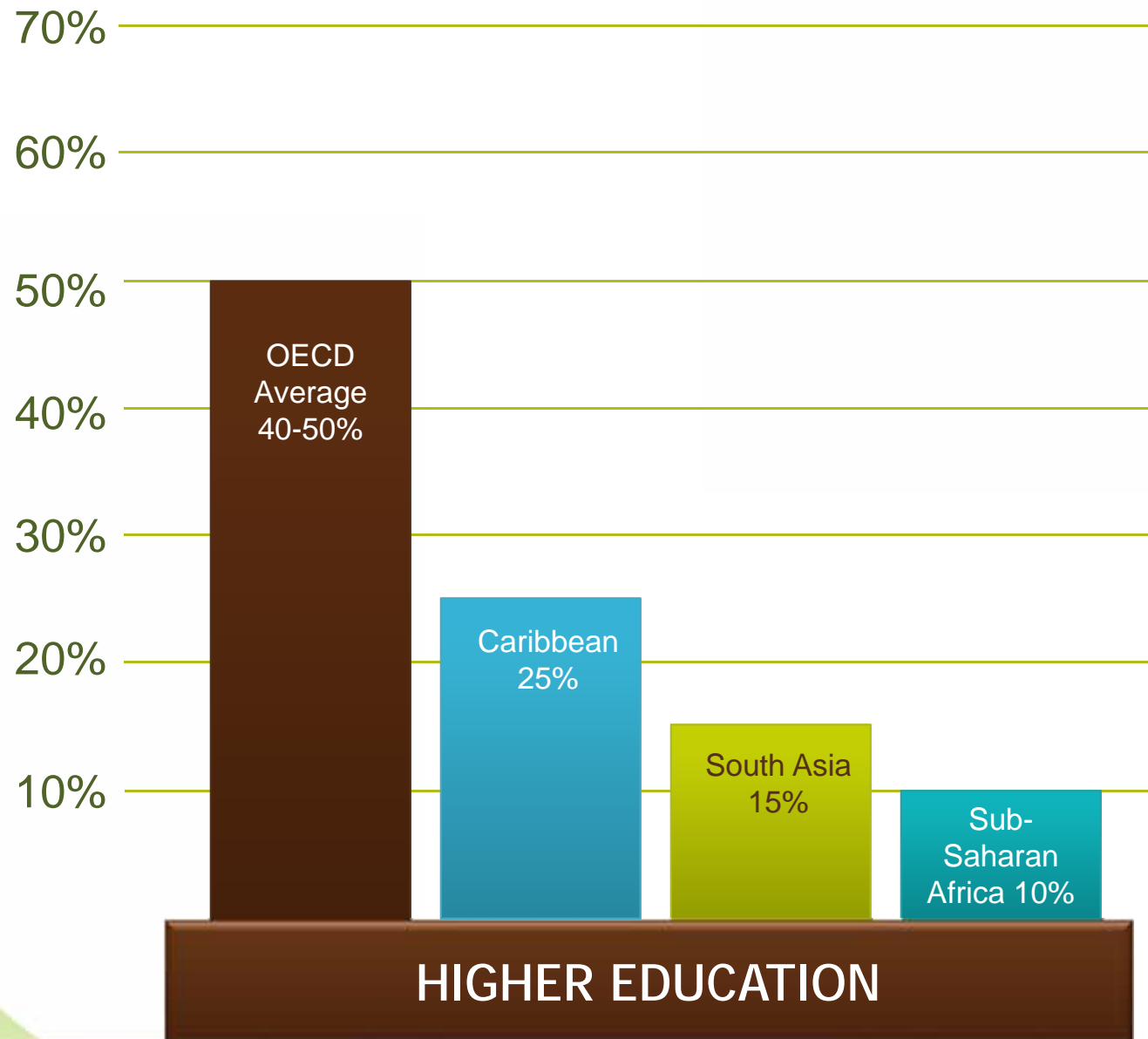


Exploding demand for HE

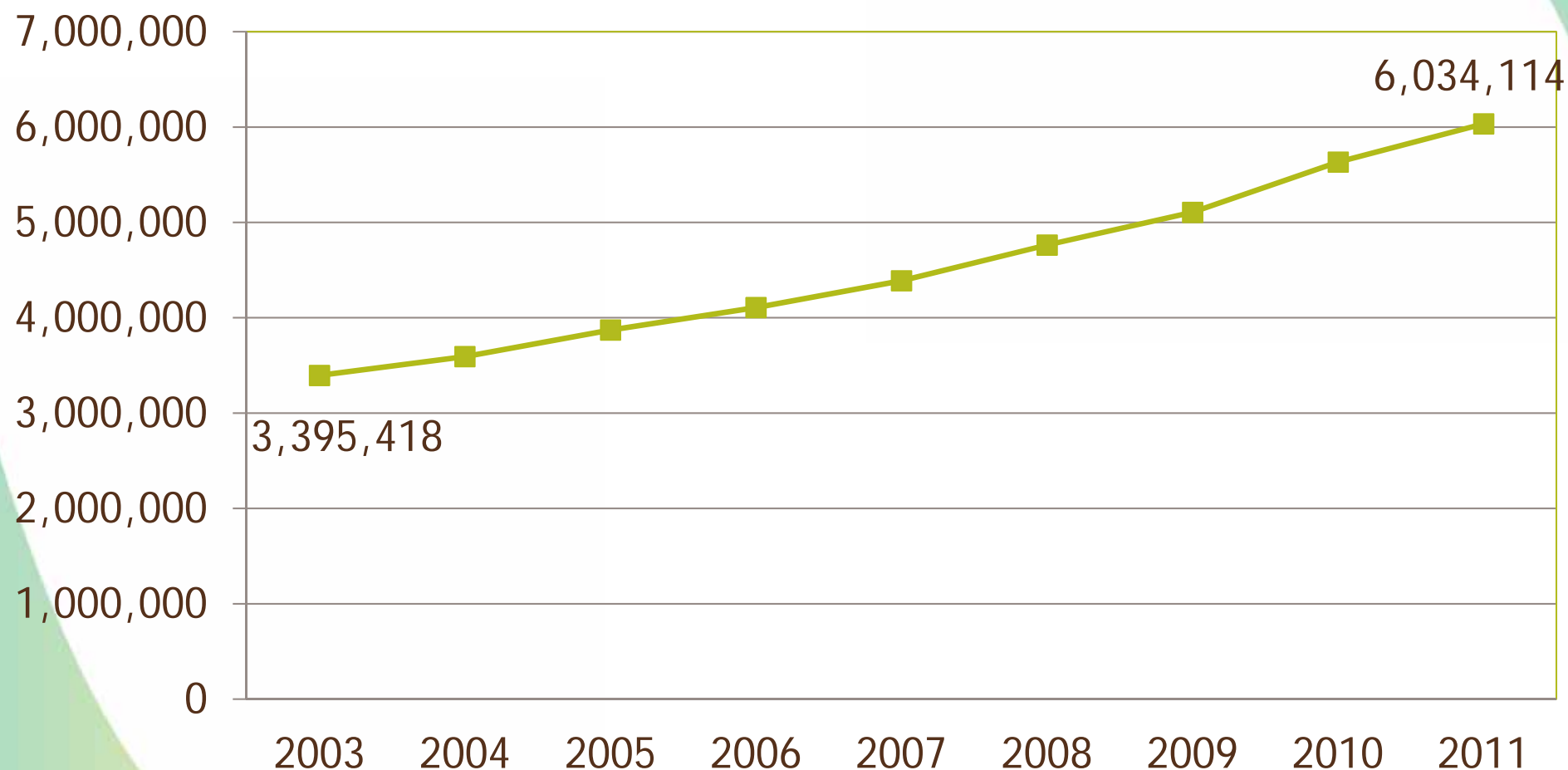
- 2007: 150.6 million tertiary students globally
- 2012: 165 million
- 2025: 263 million



Access to Higher Education



Tertiary Enrolment - Sub-Saharan Africa



Source: UNESCO Institute for Statistics Education Database <http://stats.uis.unesco.org>



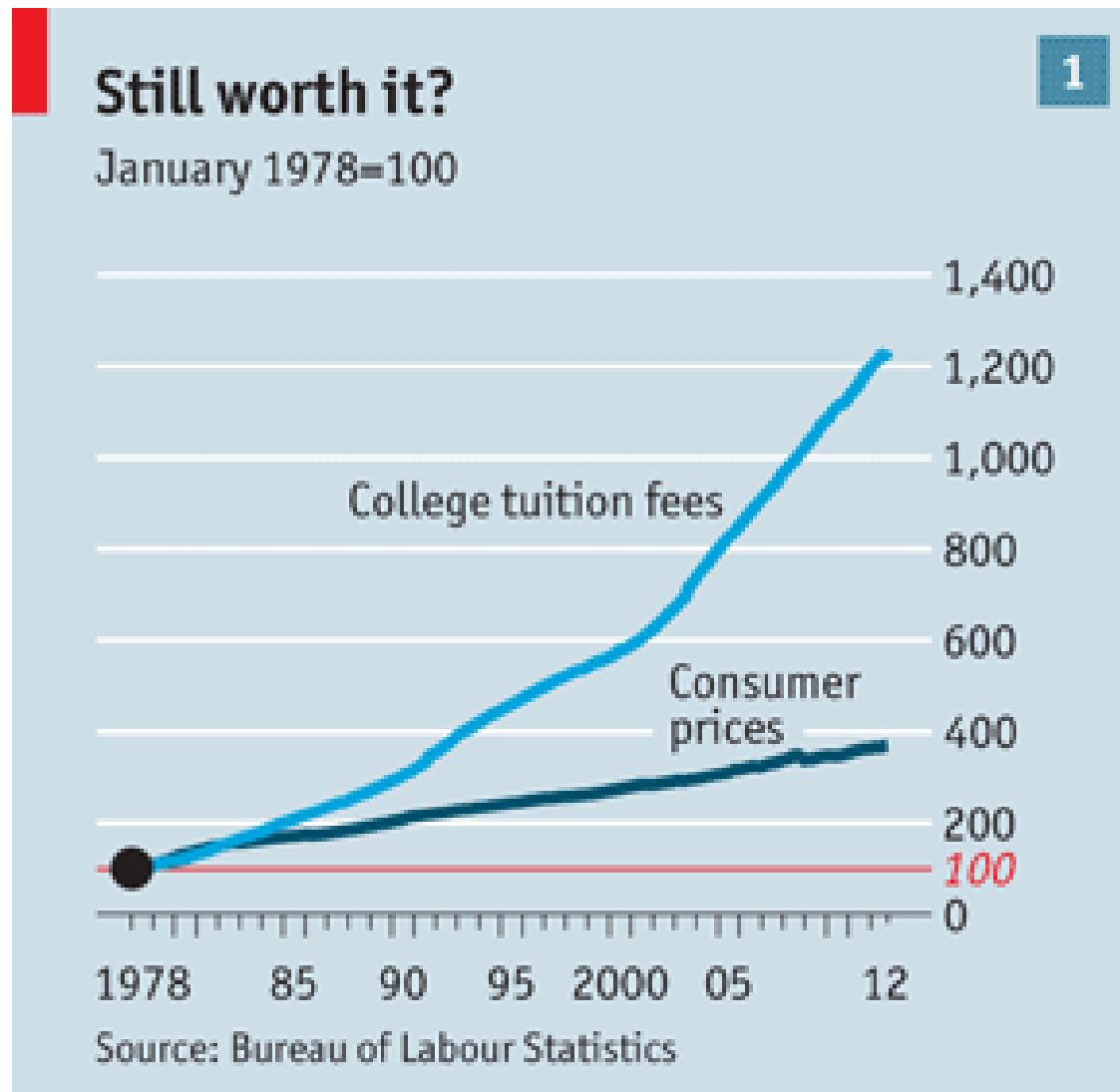
The Demand

4 new universities to cater to 30,000
needed each week to accommodate
children who will reach enrolment age
by 2025

go.nature.com/mjuzhu

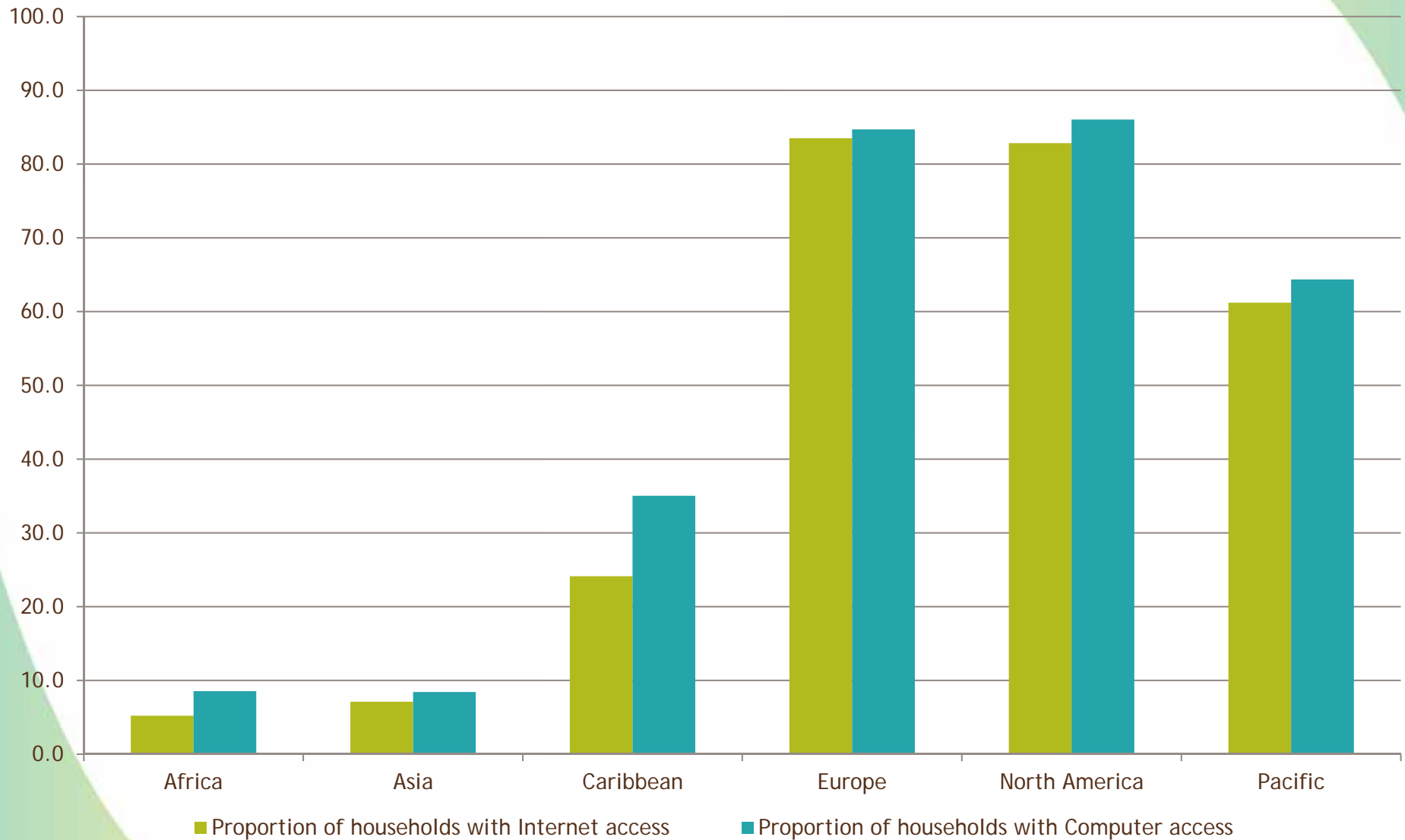
Everitt, qtd Liyanagunawardena et al, 2013

Rising Costs of Higher Education



Source: The Economist Dec 1st – 7th, 2012, Higher education, [Not what it used to be.](#)

The Digital Divide (Commonwealth countries)

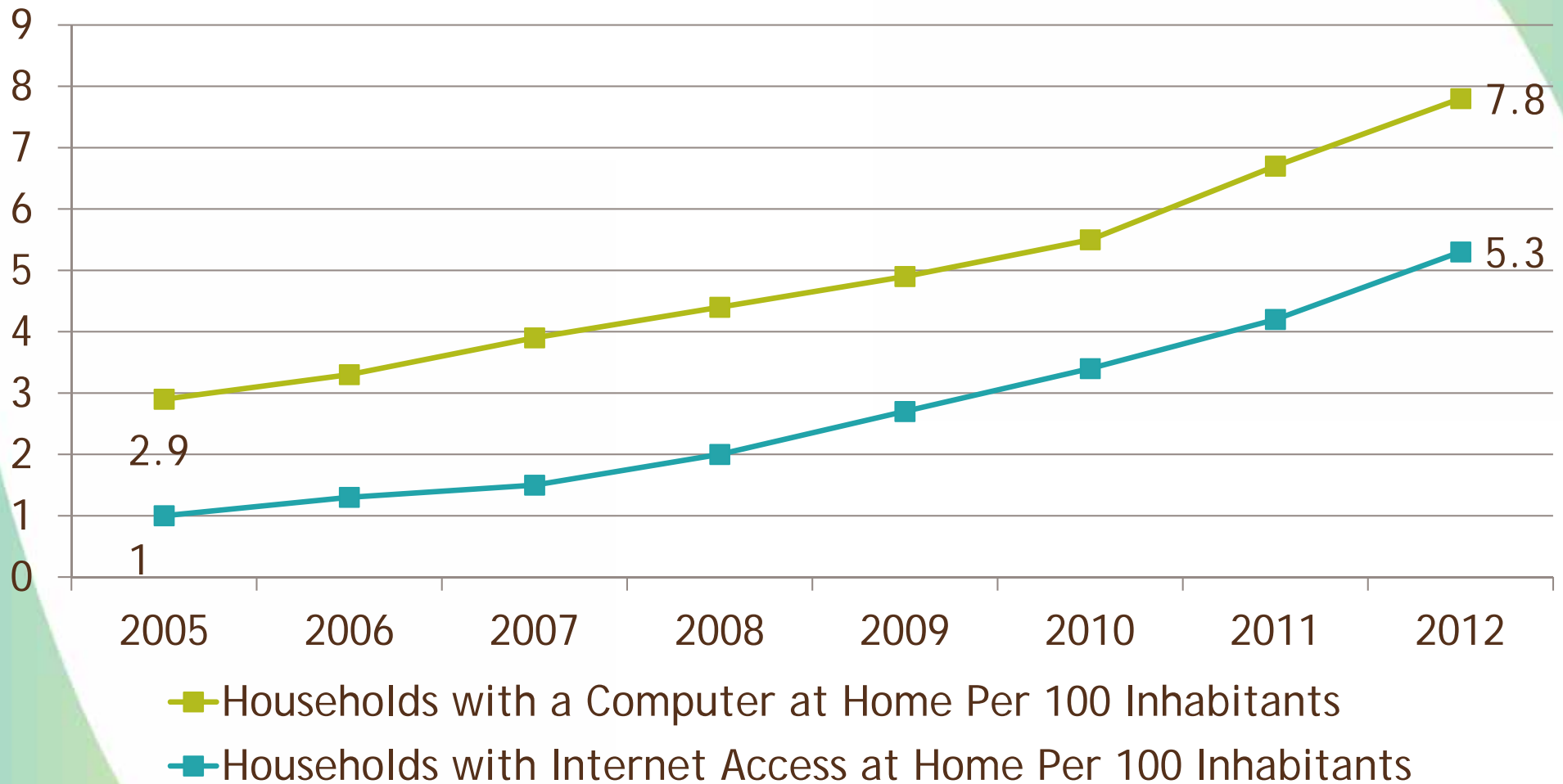


Source: International Telecommunications Union

<http://www.itu.int/ITU-D/ICTEYE/Reporting/DynamicReportWizard.aspx>



ICT in Africa



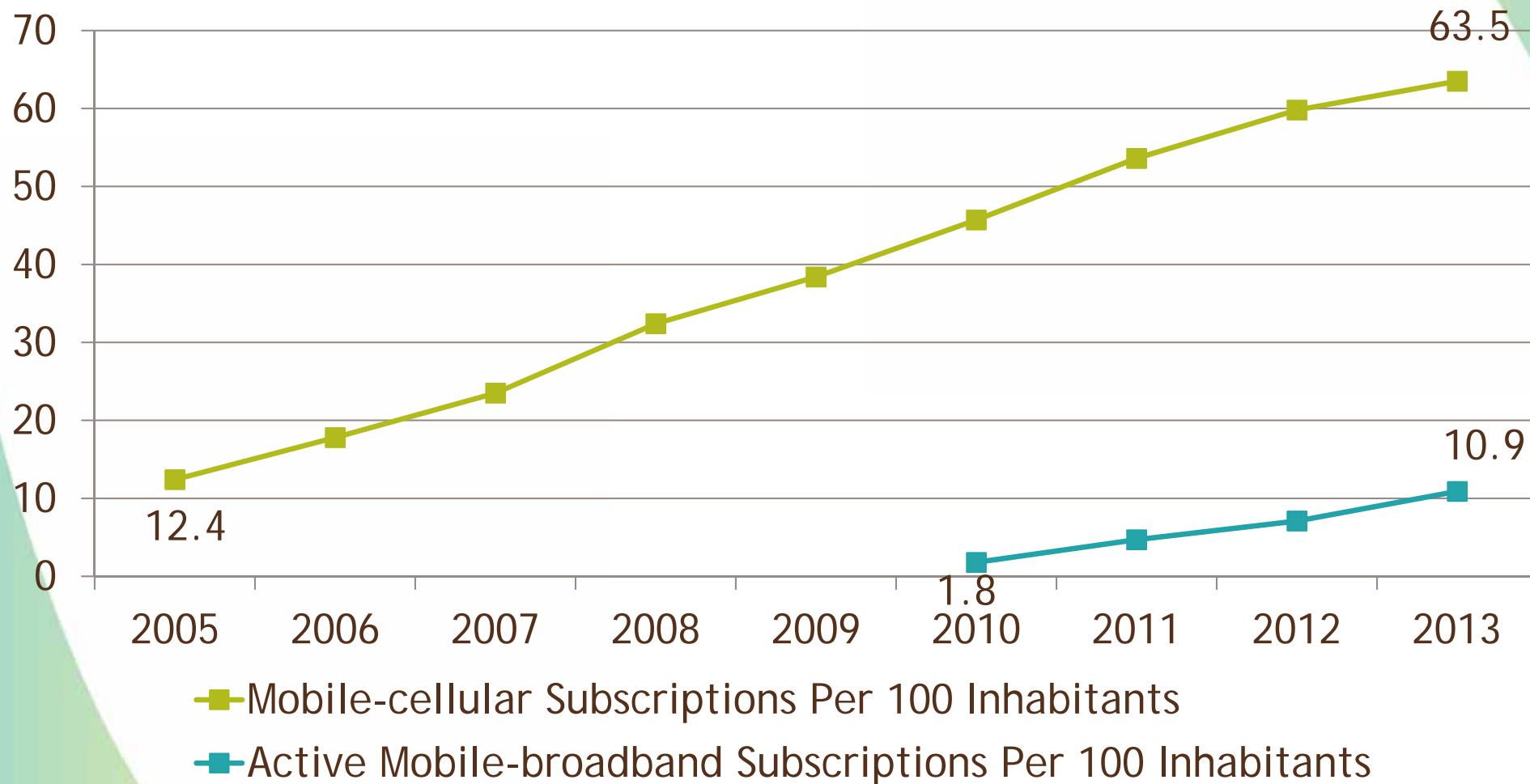
Source: [ITU – Key 2006-2013 ICT data for the world](#). Retrieved on 20 September 2013

From digital divide to digital dividend

- The emergence of mobiles
- Use of appropriate technologies that are affordable, accessible and available



ICT in Africa - Mobiles



Source: [ITU – Key 2006-2013 ICT data for the world](#). Retrieved on 20 September 2013

THE RESPONSE



Massive Open Online Courses: MOOCs

... a MOOC is a type of online course aimed at large scale participation and open access via the web. MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by OER

Wikipedia, 20/09/12



X

**FOCUS ON
SCALABILITY**



C

**FOCUS ON
COMMUNITY
AND CONNECTIONS**

What is massive?

- 100?
- 1,000?
- 10,000?
- 100,000?

Open registration?

Local cohorts?

Self-paced?

Start/end dates?

College credits?

Badges?

Role of the instructor?

Learning community?

Scripted assessments and feedback?

M

MASSIVE

O

OPEN

O

ONLINE

C

COURSE

Open content?

Free of charge?

Affordable?

Real-time interaction?

Massive Open Online Courses: MOOCs

coursera

 **Future
Learn**

**UDACITY**

**edX**



MOOCs are typically

- Free of charge
- Designed for large numbers
- Designed to encourage peer to peer learning
- Meant to award completion certificates rather than course credits

OBHE Report,
2012

Stanford 2011

- Artificial Intelligence course
- 160,000 registered
- 23,000 completed
- All countries except North Korea

STANFORD
UNIVERSITY



STANFORD ENGINEERING

Oct. 10 - DEC. 16, 2011

INTRODUCTION TO

Artificial Intelligence

In partnership with the Stanford University School of Engineering.
You can join this online worldwide class this fall.

Sebastian Thrun is a Research Professor of Computer Science at Stanford University, a Google Fellow, a member of the National Academy of Engineering and the German Academy of Sciences. Thrun is best known for his research in robotics and machine learning.

Fast Company Magazine named him as the 15th most creative person in business, the UK Telegraph included him in their list of 100 living geniuses, and Popular Science included him in their list of Brilliant 100. His self-driving car was

Signup is temporarily unavailable. Please check back in a few hours.

[Follow](#) [Courses](#)

Over 135,000 have signed up!

We're setting up the official registration page right now.

graphixshare.com

Stanford's [Introduction to Databases](#) and [Introduction to Machine Learning](#) are also available online this fall!

The 'Massive' in the MOOC

270 000

Students enrolled in Udacity's Computer Science MOOC

200 000

US University first-year students intending to study Computer Science in 2968 4-year degree granting institutions

The MOOC Experience

- March 2013: 132 MOOCs (US)
- Participants mostly from US and Europe
- Courses in Computer Science (61);
Business & Management; (21);
Humanities (14);
- Success rates: less than 10%

T Liyanagunawardena, S Williams, A Adams, 'The impact & reach of MOOCs: a developing countries' perspective', May 2013



Student Origins



- United States, 27.7 %
- India, 8.8 %
- Brazil, 5.1 %
- United Kingdom, 4.4 %
- Spain, 4 %
- Canada, 3.6 %
- Australia, 2.3 %
- Russia, 2.2 %
- Rest of the world, 41.9 %

Source: Waldrop, M. M. (2013). *Campus 2.0. Nature*, 495, 160-163.



Courses Offered



- Mathematics, 6 %
- Science, 30 %
- Arts and humanities, 28 %
- Information technology, 23 %
- Business, 13 %

Source: Waldrop, M. M. (2013). Campus 2.0. *Nature*, 495, 160-163.



FutureLearn



- A social enterprise initiative of OU UK
- Emphasis on enhancing the quality of learner/user experience
 - To cover 13 M users in five years
- Led by highly experienced instructors and designers
- Partners:
 - 23 Universities in UK, Europe and Australia
 - The British Council and the British Museum

Pakistan



- MOOC's based on Pakistan Education and Research Network (PERN2)
 - One GB bandwidth to every HE institution
- Use of integrated courses from Coursera, OCW MIT, and Khan Academy
- Course delivery using satellite TV
 - 2000 lectures
 - Synchronous delivery, exams and credits offered

India: Massive Open Online Certification

- Between 250,000 to 500,000 learners
- Certification: Data Structures, Algorithms and Programming Methodologies
- Partners: Five IITs (Chennai), Several IIITs, NASSCOM, Cognizant and TCS
- Subject Experts: Academy and Industry
- Online Mentors: senior industry professionals and academics
- Roll out: Oct 2013



MOOC for Development: COL and IIT-Kanpur (Oct-Nov 2013)

- Designed by COL and IIT-Kanpur
- Offered, managed and certified by IIT-Kanpur
- Cloud-based platform, delivery compatible with mobiles using Android
- Emphasis on quality of learner experience
- Experts from different countries for online mentoring

MOOC on M4D

- Covering use of mobile devices and technologies in education, rural banking and agricultural extension
- Sources of content:
 - IIT-Kanpur (Departments of Computer Science and Electrical Engineering)
 - COL
 - National Institute of Banking Management, India
 - Athabasca University (Center for Distance Education)
 - OER from various sources including ITU, UNESCO and the WWW Foundation
- No pre-requisites either formal or informal
- English



Comparison of Coursera, edX and Udacity, August 2012

	Coursera	edX	Udacity
For-profit?	Yes	No	Yes
Number of Students	1,100,000+	155,000+ (MITx only)	739,000
Fees	None yet	\$100 for completion certificate after autumn 2012 cohort	\$80 for Pearson test (optional)
Funding	\$16m venture capital; \$6m from partners	\$30m each from MIT & Harvard; \$1m from Gates Fdn; more from private partners	Charles River Ventures, Sebastian Thrun (amounts unknown)

What is the business model?

- 'freemium' model—free content; paid services
- Revenue through certification
- Licensing fees from universities
- Revenue generation from potential employers

What of pedagogy?

- *behaviourist pedagogy, relying primarily on information transmission, computer-marked assignments and peer assessment. Tony Bates*
- *Attention to teaching—the real revolution. Sir John Daniel*

Access to...

Online
Version



xMOOCs

- Cognitive-behaviourist pedagogy
- Teacher as expert
- Transmission of content
- Videos, automated quizzes, activities



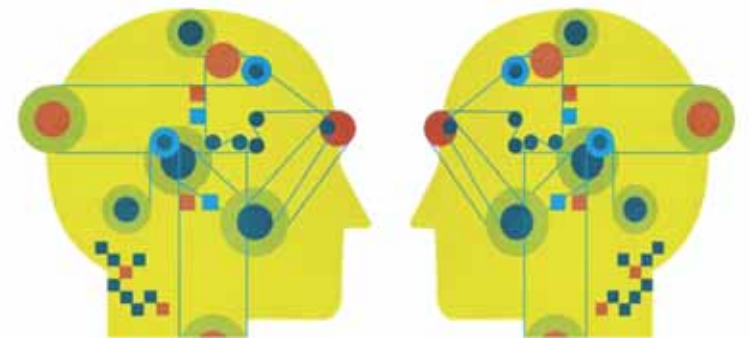
cMOOCs

- Connectivist pedagogy
- Student-student interaction
- Autonomous learner
- Construct share and distribute learning experiences



Pedagogy

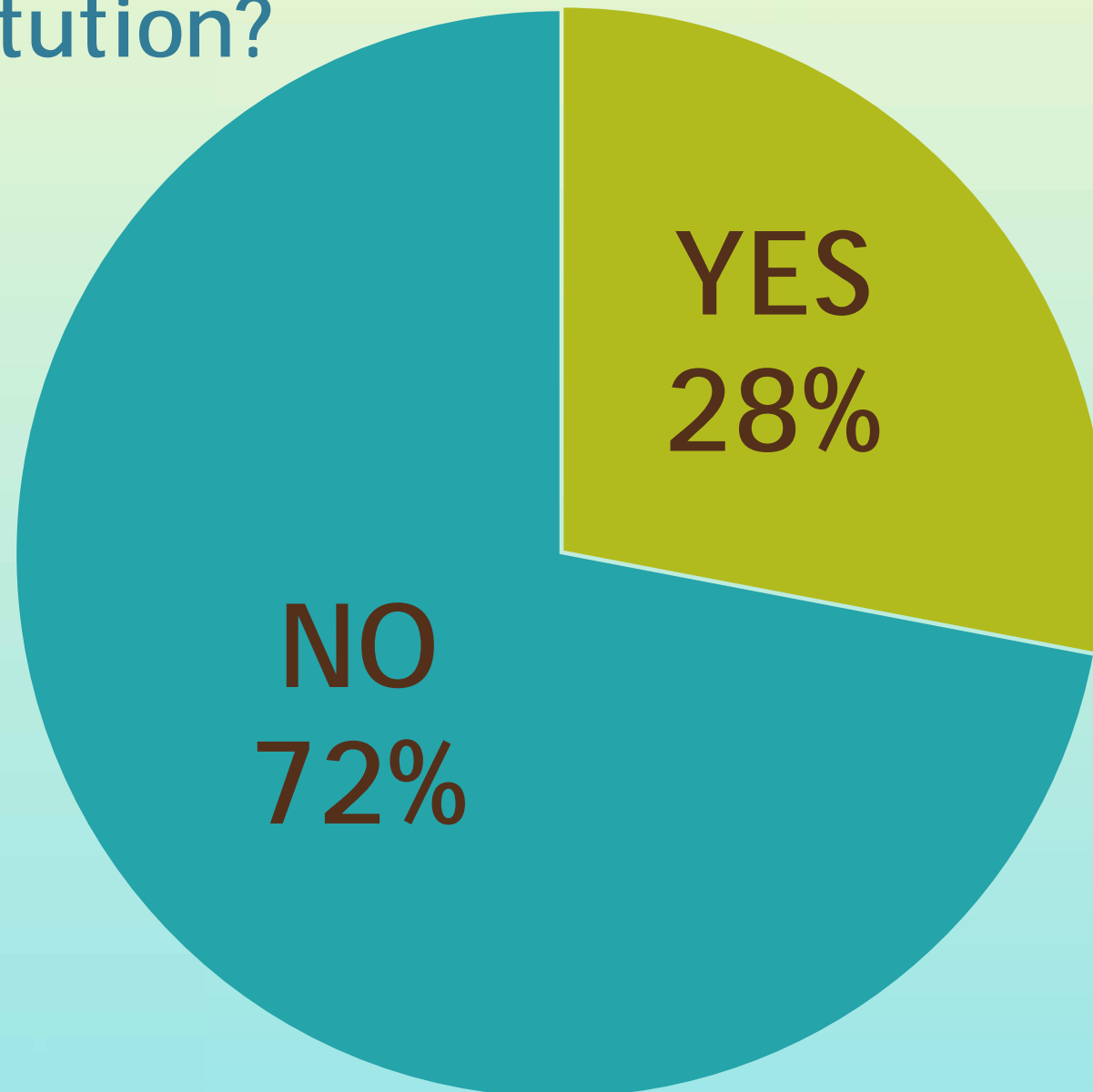
- Flipped classroom
- Short chunks of learning resources
- Interactivity
- Peer-to-peer learning
- Continuous improvement because of analytics



Credentiailling

- Certificates of completion
- Badges
- Invigilated exams at testing centres
- Credits

Do you believe students who succeed in your MOOC deserve formal credit from your institution?



Issues for Quality

- Can one size fit all?
- Student verification and academic integrity
- Is a peer reviewed assessment acceptable?
- Is there a delinking of the institutions which teach and the institutions which credential?



ODL: THE MOOC EFFECT



Implications for ODL institutions: Will MOOCs

- attract potential learners?
- identify niche areas to compete globally?
- encourage the development of flexible frameworks for credit transfers, and recognition of qualifications?

What is in it for ODL?

- Potentially increased access to learners
 - Qualitatively better than postal delivery of print or CDROM materials
- A more visible public service
- Opportunity to experiment and innovate
 - Generate possible low cost edn tech solutions

ODL: view MOOCs as platforms for Interaction and Networking

- MOOC platforms today provide for excellent online networking opportunities
 - Learner-Learner
 - Learner-Tutor/mentor/coach
- Interaction with content
 - Increased quality, as good as any F2F

Opportunities for ODL

- Use free MOOC platforms to provide better services
- Reengineer MOOCs to incorporate blended approaches
- Use learning analytics to gather data to improve teaching and learning

Learning Analytics

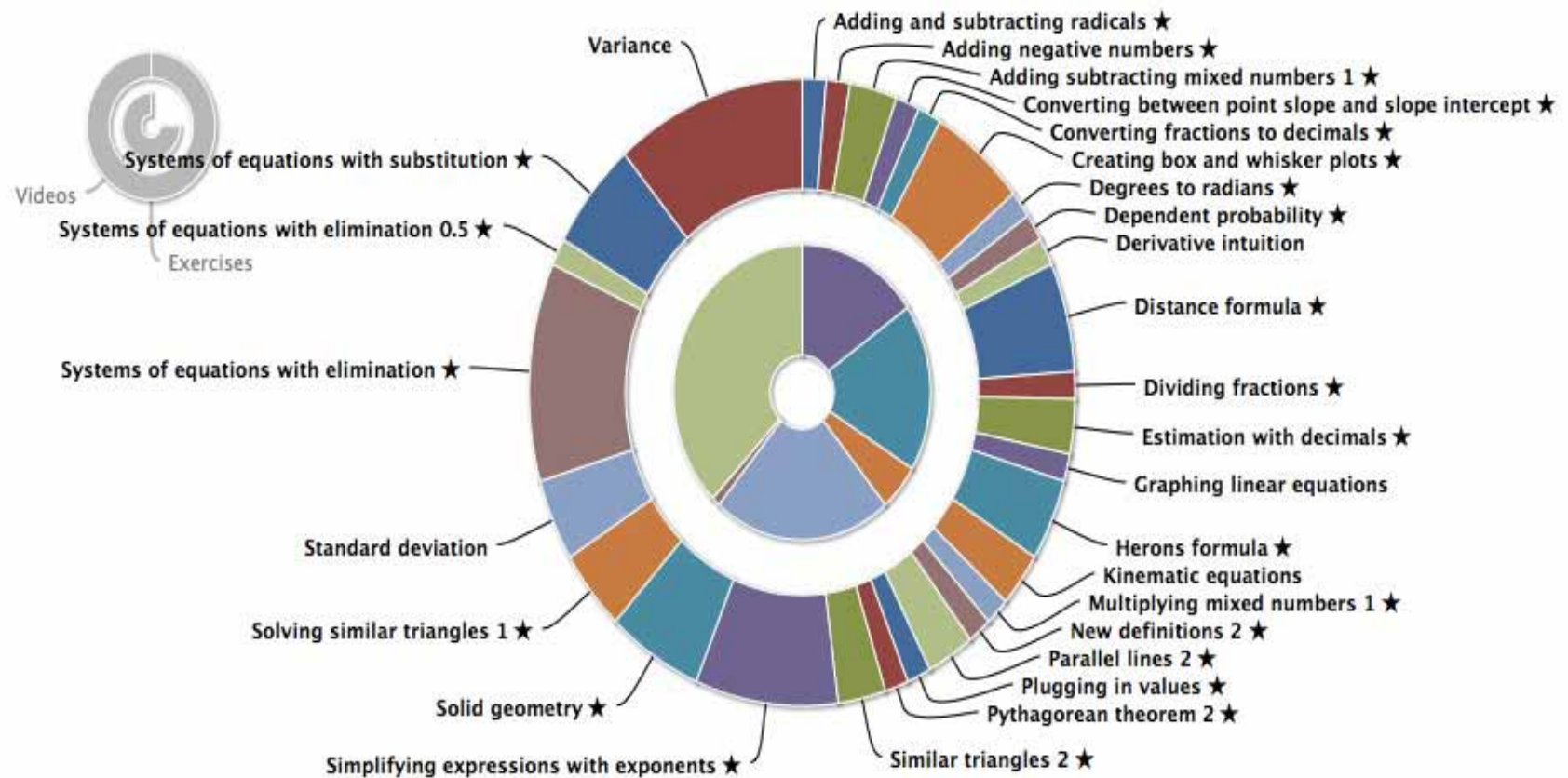
- Predictive Systems can be developed
 - An Early Warning System: an upcoming drop out can be noticed
- Recommender Systems can be built
 - Tutor/Coach can observe frequent attempts and failures in a particular activity and recommend remedial activities

Khan Academy: Analytics to Improve Learner Performance

» Focus

Shows how well you've focused on exercises and topic areas.

Today Yesterday Last 7 Days Last 30 Days



The advantage of Learning Analytics

- Creates wholly new personalization pathways for learning from masses of data
- Continuous feedback for ongoing improvement
- Improved outcomes
- Quality of learner experience enhanced

Key features benefitting ODL

- More rigorous registration control
 - Easier to detect multiple ID's
- Single, unique ID for all services
 - Difficult to achieve in less integrated or manual methods
- ODL contact centers can be advantageous
 - Use of existing services lower costs significantly

If a University in a developing country were to offer a MOOC...

- There is NO need to use only the three or four Global brands
 - These are no more than particular online platforms
- Any University can set up own or shared platform
 - Based on Cloud services or
 - Reliable local hosting services
- Can use OER wherever possible
 - Lower costs, higher quality

What is important is...

- The Brand of the offering Institution
- Quality of learning materials
- Standing of Instructors
- Availability of specialists as speakers where possible
- Availability of (online) mentors

Challenges for Learners in Developing Countries

- Relatively minor
- Connectivity to Internet could be one but could be a changing factor too
- Wide participation in Facebook and use of YouTube have reduced threats of cultural gaps in online learning and socialising

Implications for ODL

- 'unbundle' services offering more flexibility
- Provide environments for learning, unlearning and relearning;
- Build on established and successful ODL practices

Can MOOCs help us address issues of access, quality, costs, equity, relevance?



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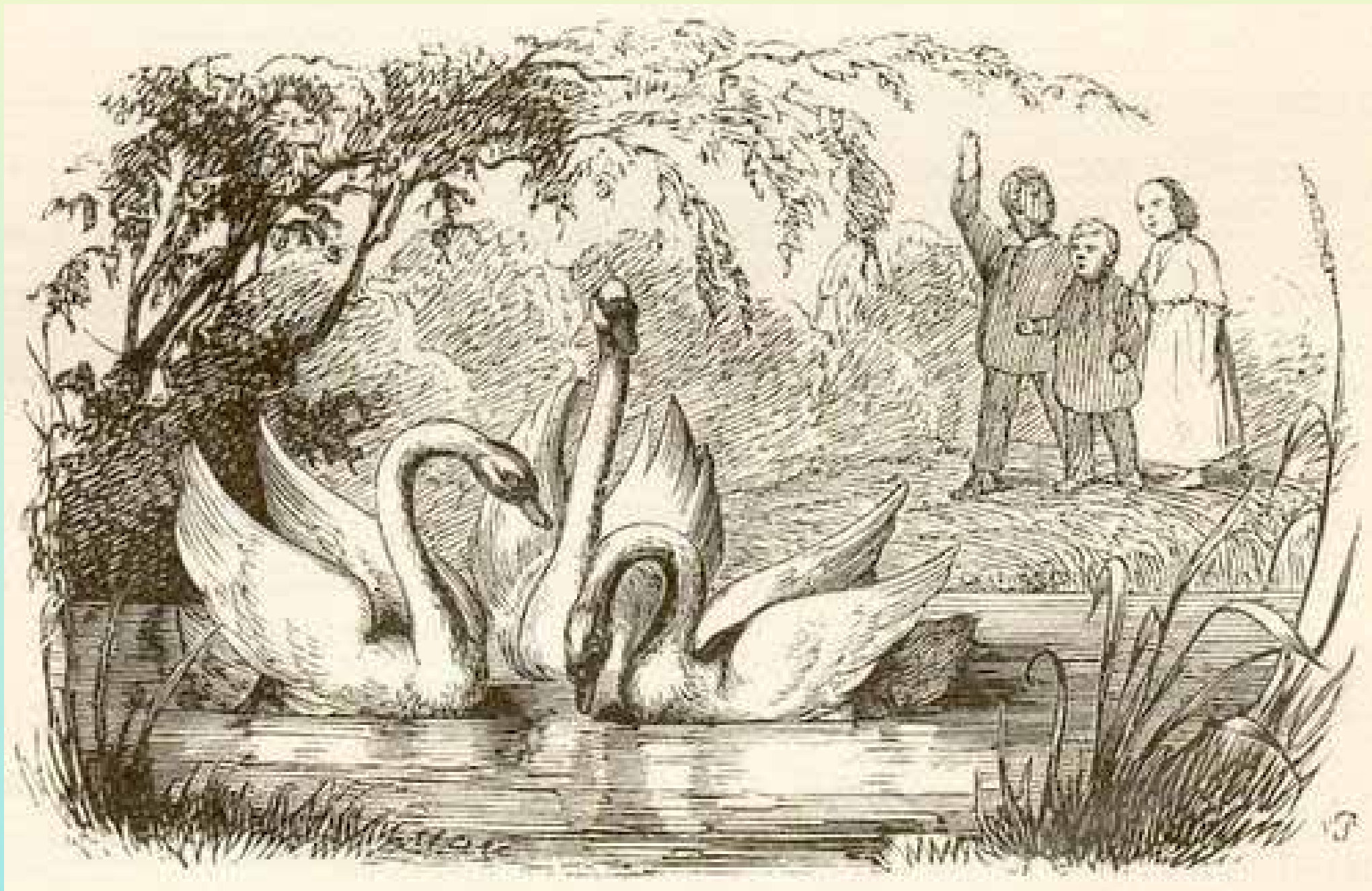
The Open
University



HARVARD UNIVERSITY



Massachusetts
Institute of
Technology



Source: Vilhelm Pedersen